

REMARKS

By this Amendment, Applicants cancel claims 21, 29, and 31, without prejudice or disclaimer of the subject matter therein, amend claims 1, 5, 7-15, 19, 20, 22-28, 30, 32-34, and 40, and add new claims 41-54. Claims 1-20, 22-28, 30, and 32-54 are therefore pending.

In the Office Action of December 23, 2003¹ (“OA”):

1. Claims 5, 25, and 28 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite;

2. Claims 1, 2, 5, 6, 12, 16, 17, 27-30, 33, and 40 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,572,320 to *Reintjes et al.* (“*Reintjes*”);

3. Claims 1, 2, 5-7, 9, 10, 12-19, 21, 22, 24-31, 33-38, and 40 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,968,371 to *Verdegan et al.* (“*Verdegan*”);

4. Claims 20, 23, and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Verdegan*;

5. Claims 3, 4, and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Verdegan* in view of U.S. Patent No. 4,129,034 to *Niles et al.* (“*Niles*”); and

6. Claims 11 and 32 were objected to as being dependent upon a rejected base claim but deemed as drawn to allowable subject matter.

Applicants appreciate the Examiner’s indication of allowable subject matter and submit that the rejections and objection should be withdrawn for the reasons discussed below.

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

Objection to claims 11 and 32

The Examiner objected to claims 11 and 32 as being dependent upon a rejected base claim, indicating that these claims would be allowable if rewritten in independent form with the limitations of the base and intervening claims. By this Amendment, claim 11 is re-written in independent form including the recitations of independent claim 1. In addition, claim 32 is re-written in independent form including recitations of claims 27 and 30². Applicants submit that claims 11 and 32, as currently presented, are in condition for allowance. Applicants, therefore, request withdrawal of the objection and the timely allowance of these pending claims.

Rejection of claims 5, 25, and 28 under 35 U.S.C. § 112, second paragraph

Claims 5, 25, and 28 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for “failing to particularly point out and distinctly claim the subject matter” regarded as the invention. The Examiner stated that the term “or” in these claims “creates an improper Markush group...[and] should be changed to ‘and.’” Claims 5, 25, and 28, as amended herein, recite proper Markush groups and are fully compliant with 35 U.S.C. 112, second paragraph. The rejection of claims 5, 25, and 28 under 35 U.S.C. 112, second paragraph, should therefore be withdrawn.

Rejection of claims 1, 2, 5, 6, 12, 16, 17, 27-30, 33, and 40 based on *Reintjes*

The rejection of claim 29 is rendered moot by the cancellation of that claim. Applicants traverse the rejection of claims 1, 2, 5, 6, 12, 16, 17, 27, 28, 30, 33, and 40 under 35 U.S.C. § 102(b) because *Reintjes* fails to anticipate the claims. In order to properly anticipate Applicants’ claimed invention under 35 U.S.C. § 102(b), each and every element of the claim in

² Although claim 32, as currently presented, does not include all of the elements recited in canceled claim 29, from which claim 30 previously depended, Applicants submit that claim 32 is in condition for allowance.

issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Further, “[t]he identical invention must be shown in as complete detail as is contained in the...claim.” See M.P.E.P. § 2131 (8th Ed., Aug. 2001), quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, “[t]he elements must be arranged as required by the claim.” M.P.E.P. § 2131 (8th Ed. 2001), p. 2100-69.

Claim 1, as currently presented, recites a method including *inter alia*:

initiating operation of a filtration system coupled to the engine to
clean the engine fluid when the characteristic of cleanliness
measured with the particle counter exceeds a threshold value.

Reintjes does not teach at least the above subject matter. *Reintjes* describes, as noted by the Examiner (OA at 2), a system for monitoring particles in engine oil (Abstract; col. 2, lines 20-39). *Reintjes*, however, does not disclose a filtration system, let alone “initiating operation of a filtration system...to clean the engine fluid when the characteristic of cleanliness measured with the particle counter exceeds a threshold value,” as claimed. *Reintjes* does not teach at least the claimed “initiating” element and, therefore, fails to teach each and every element recited in independent claim 1.

As set forth above, anticipation under 35 U.S.C. § 102(b) requires that each and every claim element be disclosed in as complete detail as is in the claim by the applied reference. *Reintjes* does not teach each and every feature of independent claim 1 and thus, as a matter of law, cannot anticipate claim 1. The rejection of independent claim 1 under 35 U.S.C. §102(b) as anticipated by *Reintjes* should therefore be withdrawn.

Independent claim 12, as currently presented, recites a combination of elements including *inter alia*:

a filtration system in fluid communication with the engine for filtering and returning engine fluid from the engine, wherein the filtration system is initiated when the characteristic of cleanliness measured by the particle counter exceeds a threshold value.

As explained above in connection with claim 1, *Reintjes* fails to teach a filtration system, let alone that “the filtration system is initiated when the characteristic of cleanliness measured by the particle counter exceeds a threshold value,” as claimed. *Reintjes* fails to teach or suggest each and every element recited in claim 12 and therefore does not anticipate claim 12.

Independent claim 27, although of different scope, includes elements similar to those recited in claim 1 noted above. In particular, claim 27 recites in part:

initiating operation of the filtration system during the first period if the characteristic of cleanliness measured by the particle counter exceeds a threshold value during the first time period.

For at least the reasons presented above in connection with claim 1, claim 27 is not anticipated by *Reintjes*.

Because *Reintjes* fails to anticipate independent claims 1, 12, and 27, the rejection of these claims under 35 U.S.C. § 102(b) based on *Reintjes* should be withdrawn. Because each of claims 2, 5, 6, 26, 17, 28-30, 33, and 40 depends from base claim 1, 12, or 27, the rejection of these dependent claims should also be withdrawn for at least the same reasons set forth in connection with claims 1, 12, and 27. Further, *Reintjes* fails to teach all of the recitations of claims 2, 5, 6, 26, 17, 28-30, 33, and 40. Accordingly, Applicants request withdrawal of the rejection of claims 1, 2, 5, 6, 12, 16, 17, 27, 28, 30, 33, and 40 under 35 U.S.C. §102(b) based on *Reintjes* and the timely allowance of these pending claims.

Rejection of claims 1, 2, 5-7, 9, 10, 12-19, 21, 22, 24-31, 33-38, and 40 based on *Verdegan*

The rejection of claims 21 and 31 is rendered moot by the cancellation of that claim.

Applicants traverse the rejection of claims 1, 2, 5-7, 10, 12-19, 22, 24-30, 33-38 and 40 under 35 U.S.C. § 102(b) because *Verdegan* fails to anticipate the claims.

As noted above, independent claim 1 recites, *inter alia*:

initiating operation of a filtration system coupled to the engine to
clean the engine fluid when the characteristic of cleanliness
measured with the particle counter exceeds a threshold value.

Verdegan does not teach at least the above elements. *Verdegan* describes a “lubricant filtering and monitoring system” (Abstract). As the Examiner notes, *Verdegan* mentions that “increased frequency of...excursions or increases in their magnitude would indicate an abnormal, undesirable situation, such as imminent catastrophic failure” (col. 4, lines 21-32). Although *Verdegan* mentions filtering, the reference does not disclose “initiating operation of a filtration system...to clean the engine fluid when the characteristic of cleanliness measured with the particle counter exceeds a threshold value,” as claimed. The Examiner alleges that *Verdegan*’s system “may be used to indicate the need for a filter change when the particle count is too high, after which a second sampling period will take place with the new filter” (OA at 3). Even if this allegation were valid, indicating the need for a filter change and changing a filter when a particle count is too high does not constitute “initiating operation of a filtration system,” as recited in claim 1. Moreover, indicating an “abnormal, undesirable situation,” as mentioned by *Verdegan* is not consistent with “initiating operation of a filtration system,” as claimed. *Verdegan* does not teach at least “initiating operation of a filtration system,” as claimed and, therefore, fails to teach each and every element recited in independent claim 1. Accordingly, claim 1 is not anticipated by *Verdegan*.

Independent claim 12, as currently presented, recites a combination of elements including *inter alia*:

a filtration system in fluid communication with the engine for filtering and returning engine fluid from the engine, wherein the filtration system is initiated when the characteristic of cleanliness measured by the particle counter exceeds a threshold value.

Verdegan does not teach the above elements. Although *Verdegan* mentions a filter, the reference does not disclose “a filtration system ... [that] is initiated when the characteristic of cleanliness measured by the particle counter exceeds a threshold value,” as claimed. For at least this reason, and those presented above in connection with claim 1, *Verdegan* does not disclose the above elements of claim 12. *Verdegan* therefore fails to anticipate claim 12.

Independent claim 22, as currently presented, recites a method including *inter alia*:

operating a filtration system for a first period of time in the test cycle; and

operating the filtration system during a second period of time in the test cycle when the characteristics of the cleanliness of the engine fluid reaches a threshold level.

Although *Verdegan* mentions filtering, the reference does not teach “operating a filtration system for a first time period” and “operating the filtration system during a second period of time...when the characteristics of the cleanliness of the engine fluid reaches a threshold level,” as claimed. For at least this reason, *Verdegan* does not anticipate claim 22.

Independent claim 27 recites a method including *inter alia*:

initiating operation of the filtration system during the first period if the characteristic of cleanliness measured by the particle counter exceeds a threshold value during the first time period.

For at least the reasons presented above in connection with claims 1, claim 27 is not anticipated by *Verdegan*.

Independent claim 18 recites, *inter alia*, a “filtration system for cleaning engine fluid during an engine dynamometer test” (emphasis added). *Verdegan* does not disclose this claimed feature and therefore fails to anticipate claim 18.

Independent claim 26, as currently presented, recites a system “for detecting contaminants in engine fluid from a running engine during an engine dynamometer test,” including:

a particle counter system ..., wherein information derived from the particle counter system is used to determine a characteristic of cleanliness of the engine fluid during operation of the engine at a plurality of engine loads during the dynamometer test.

Verdegan does not teach a particle counter system that determines a “characteristic of cleanliness of the engine fluid during operation of the engine at a plurality of engine loads during the dynamometer test,” as recited in claim 26. For at least these reasons, *Verdegan* fails to anticipate claim 26.

Because *Verdegan* fails to anticipate independent claims 1, 12, 18, 22, 26, and 27, the rejection of these claims under 35 U.S.C. § 102(b) based on *Verdegan* is improper and should be withdrawn. Because each of claims 2, 5-7, 9, 10, 13-17, 19, 24, 25, 28-30, 33-38 and 40 depends from claim 1, 12, 18, 22, or 27, the rejection of these dependent claims should also be withdrawn for at least the same reasons set forth in connection with the respective base claims. Also, *Verdegan* fails to teach all of the recitations of claims 2, 5-7, 9, 10, 13-17, 19, 24, 25, 28-30, 33-38 and 40. Accordingly, Applicants request withdrawal of the rejection of claims 1, 2, 5-7, 10, 12-19, 22, 24-30, 33-38 and 40 under 35 U.S.C. §102(b) based on *Verdegan* and the timely allowance of these pending claims.

Rejection of claims 20, 23, and 29 under 35 U.S.C. § 103(a)

The rejection of claim 29 is rendered moot by the cancellation of that claim. Applicants traverse the rejection of claims 20 and 23 under 35 U.S.C. § 103(a) because a *prima facie* case of obviousness has not been and cannot be established based on *Verdegan*. To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be met. First, the cited references, taken alone or in combination, must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must “be found in the prior art, and not be based on applicant’s disclosure.” M.P.E.P. § 2143 (8th ed. 2001).

Claim 20 depends indirectly from claim 18 and therefore includes all of the elements recited in claim 18. In particular, claim 20 recites, *inter alia*, a “filtration system for cleaning engine fluid during an engine dynamometer test.” As explained above in connection with claim 18, *Verdegan* does not disclose this claimed feature. In addition, *Verdegan* does not suggest this claimed feature. *Verdegan* therefore fails to teach or suggest each and every element recited in claim 20. For at least this reason, a *prima facie* case of obviousness has not been established with respect to claim 20.

Moreover, claim 20, as currently presented, recites in part “a second external filter placed downstream of the external pump, the second external filter removing particulate of a second size, smaller than the first size, from the engine fluid.” The Examiner conceded that *Verdegan* fails to disclose “a second filter downstream of the pump” (OA at 3). The Examiner, however, alleged that it would have been obvious to use “an additional filter in order to provide an

increased filtering effect” and that “multiplying of a structure to achieve an increase in the effect of the structure is an obvious modification” (OA at 4). Despite the Examiner’s allegations, it would not have been obvious to modify *Verdegan* in a manner resulting in the invention defined by claim 20. Placing a first filter that removes particulate of a first size from the engine fluid upstream of an external pump and “a second external filter ...[that removes] particulate of a second size, smaller than the first size, from the engine fluid” downstream of the pump is not merely “multiplying...a structure to achieve an increase in the effect of the structure.” Each of the first and second filters is located at a particular location with respect to the pump and has a distinct effect (i.e., filtering particulate of a particular size) that contributes to an overall filtering effect. For at least these reasons, it would not have been obvious to “modify the filter of [*Verdegan*]...by using an additional filter in order to provide an increased filtering effect,” as alleged.

With regard to claim 23, this claim depends from claim 22 and, therefore, recites a combination including:

operating a filtration system for a first period of time in the test cycle; and

operating the filtration system during a second period of time in the test cycle when the characteristics of the cleanliness of the engine fluid reaches a threshold level.

As explained above, *Verdegan* does not disclose these claimed features. In addition, *Verdegan* does not suggest these features. Accordingly, a *prima facie* case of obviousness has not been established with respect to claim 23 based on *Verdegan*. Applicants note that the Examiner conceded (OA at 4) that *Verdegan* fails to disclose that “the running of the engine is halted in response to cleanliness characteristics.” Applicants submit that *Verdegan* further fails to disclose “halting the running of the engine when a malfunction criteria is met” as currently claimed.

Although Applicants note other aspects of claim 23 that distinguish the claim from *Verdegan*, Applicants do not acquiesce to the Examiner's allegations (OA at 4) that it would have been "obvious to halt engine operation."

For at least the reasons advanced above, a *prima facie* case of obviousness has not been established with respect to claims 20 and 23. The rejection of these claims under 35 U.S.C. § 103(a) should therefore be withdrawn. Accordingly, Applicants request withdrawal of the rejection of claims 20 and 23 under 35 U.S.C. § 103(a) and the timely allowance of these pending claims.

Rejection of claims 3, 4, and 8 under 35 U.S.C. § 103(a)

Applicants traverse the rejection of claims 3, 4, and 8 under 35 U.S.C. § 103(a) because a *prima facie* case of obviousness has not been established based on *Verdegan* and *Niles*.

Each of claims 3, 4, and 8 depends from base claim 1 and therefore recites a combination including:

initiating operation of a filtration system coupled to the engine to clean the engine fluid when the characteristic of cleanliness measured with the particle counter exceeds a threshold value.

As explained above in connection with claim 1, *Verdegan* fails to teach at least these recitations. *Verdegan* also fails to suggest the claimed "initiating." *Niles* does not cure *Verdegan*'s deficiencies. *Niles* is directed to "instrumentation and techniques for checking the performance of internal combustion engines" (col. 1, lines 6-9). *Niles* does not teach or suggest at least the "initiating operation of a filtration system," as required by claims 3, 4, and 8. Accordingly, neither *Verdegan* nor *Niles*, nor a combination thereof, teaches or suggests each and every element recited in claims 3, 4, and 8. For at least this reason, a *prima facie* case of obviousness has not been established with respect to these claims.

Further, claims 3 recites, *inter alia*, “operating the engine in a dynamometer test during the stage of measuring the characteristic of cleanliness of the engine fluid” and claim 4 recites, *inter alia*, “halting the dynamometer test based on the characteristic of cleanliness of the engine fluid.” *Verdegan* fails to teach or suggest these recitations of claims 3 and 4. In fact, the Examiner conceded (OA at 4) that *Verdegan* fails to disclose “monitoring...during operating the engine in a dynamometer test and...[halting the test] based on a cleanliness characteristic.” *Niles* fails to cure *Verdegan*’s deficiencies. Although *Niles* mentions a dynamometer test, the reference does not teach or suggest the claimed “operating” and “halting” features noted above. Accordingly, *Verdegan* and *Niles*, taken alone or in combination, fail to teach or suggest each and every feature recited in claims 3 and 4. For at least this reason, a *prima facie* case of obviousness has not been established with respect to these claims.

Further, a *prima facie* case of obviousness has not been established at least because the requisite motivation to combine the references is lacking. Determinations of *prima facie* obviousness must be supported by a finding of “substantial evidence.” *See In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001). Specifically, unless “substantial evidence” found in the record supports the factual determinations central to the issue of patentability, including motivation, the rejection is improper and should be withdrawn.

In this case, there is no “substantial evidence” in the record to properly support a combination of *Verdegan* and *Niles*, and the requisite “clear and particular” motivation to support a *prima facie* case of obviousness is lacking. The Office Action does not show that a skilled artisan having the cited art before him would have been motivated to combine the references in a manner resulting in Applicants’ claimed invention. The Examiner alleged that a skilled artisan would have modified “the engine system of [*Verdegan*]...by including a

dynamometer tester in order to provide a power output test for the engine in working environments such as a moving vehicle” (OA at 4). This statement does not establish the required motivation to combine the references. Further, the mere fact that a dynamometer tester might “provide a power output test” does not evidence that a skilled artisan would have been motivated to combine *Niles* with *Verdegan*. The Examiner, moreover, fails to show how combining a dynamometer tester would be combined with *Verdegan*’s system to facilitate such a capability.

Regardless of whether or not a “power output test” would in fact result by combining *Niles* with *Verdegan*, the Office Action provides no evidence or reasoning to show why a skilled artisan would have been motivated to combine the references in a manner resulting in the invention defined by claims 3, 4, and 8. The Office Action merely provides a description of how *Niles* allegedly teaches certain features but fails to provide more than conclusory statements supporting a motive for choosing Applicants’ claimed combination.

Applicants call attention to M.P.E.P. § 2143.01, which makes clear that:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination (citations omitted).

The Office Action does not show that the cited art “suggests the desirability of the” combination. The Office Action provides no evidence or reasoning to show why, other than to attempt to meet the terms of the claims, a skilled artisan would have been motivated to combine the references.

Applicants note that the requirements for establishing *prima facie* obviousness must “be found in the prior art, and not be based on applicant’s disclosure.” M.P.E.P. § 2143 (8th ed. 2001). As M.P.E.P. § 2142 articulates:

Knowledge of applicant's disclosure must be put aside....
[I]mpermissible hindsight must be avoided and the legal
conclusion must be reached on the basis of the facts gleaned from
the prior art.

Applicants submit that the conclusions in the Office Action were not reached based on facts gleaned from the prior art and Applicants' claims were used to reconstruct the prior art. A skilled artisan would not have been motivated, without consulting Applicants' disclosure, to combine *Verdegan* and *Niles* in a manner resulting in the invention defined by Applicants' claims. While *Verdegan* mentions filtering and monitoring lubricant and *Niles* mentions a dynamometer, neither of these references teaches or suggests combining their teachings as proposed in the Office Action. Consequently, the conclusions in the Office Action constitute improper hindsight reasoning.

For at least the reasons advances above, the requisite motivation to combine is lacking. Aside from the fact that no motivation exists for combining *Verdegan* and *Niles*, one skilled in the art would have recognized that there is no reasonable expectation of success in combining these references.

Because the applied art does not teach or suggest each and every claimed element and the required motivation to combine and expectation of success are lacking, a *prima facie* case of obviousness has not been established with respect to claims 3, 4, and 8. The rejection of claims 3, 4, and 8 under 35 U.S.C. § 103(a) should therefore be withdrawn. Applicants, thus, request withdrawal of the rejection of claims 3, 4, and 8 under 35 U.S.C. §103(a) and the timely allowance of these pending claims.

New claims 41-54

Neither *Reintjes*, *Verdegan*, nor *Niles*, nor any combination thereof, teaches or suggests each and every feature recited in new claims 41-54. Applicants therefore request the timely allowance of these new claims.

Conclusion


In view of the foregoing, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: March 23, 2004

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